Remarks/Arguments

Claims 1, 6, 8-10, 12-14 and 17-24 are pending in the application. Claims 2-5, 7, 11, 15 and 16 have been canceled without prejudice or disclaimer.

Claim rejections

Section 103

Claim 1, 5, 6, 8-11, 13-15 and 17-24 were rejected under 35 USC 103(a) as being unpatentable over Arndt et al. (pub. no. 2003/0023932) ("Arndt") in view of Godiwala et al. (US 5,361,267). Claim 11 has been canceled. The Applicant respectfully traverses the rejection of the remaining claims. The Office Action recognizes that Arndt does not disclose soft error handler logic to perform one of multiple possible operations to clear the soft error, the multiple possible operations including one of flushing the cache, invalidating a cache line, and clearing an intermediate portion of the cache as recited in the independent claims. The Office Action relies on Godiwala for these features.

The Applicant respectfully disagrees that Godiwala supplies the disclosure absent from Arndt. The Office Action cites Godiwala at col. 47, lines 30-34. However, this only mentions partially or completely flushing a cache. Moreover, these actions are not performed by soft error handler logic as in the present claims. Instead, they are for flushing dirty lines from a cache (see the preceding discussion in Godiwala at col. 45, line 39 to col. 47, line 29). "Dirty" data in a cache simply means data that has been worked on by a processor; it has nothing to do with soft errors.

The claims are further allowable over the prior art in view of the amendments set forth above. Concerning independent claim 1 in particular, the prior art does not suggest generating an expected parity for data before loading the data into a cache, fetching the data from the cache, calculating a parity for the fetched data, comparing the expected parity with the calculated parity, and detecting a soft error in the fetched data based on the comparing, as recited. Arndt only discloses conventional detection of a parity error by hardware error detection logic, and taking a hardware branch to a machine check interrupt vector. See, e.g., paragraph [0028]. Consequently, Arndt's system never performs a parity check independently of a hardware check,

based on comparing an expected parity and a calculated parity, to detect a soft error in a cache line. Godiwala is similarly silent as to such a feature.

Independent claims 6, 13 and 23 have been amended along the same lines as claim 1 and are therefore likewise allowable over the prior art. Withdrawal of the rejection is therefore respectfully requested.

Claim 12 was rejected under 35 USC 103(a) as being unpatentable over Arndt in view of Bossen et al. (US 6,332,181) ("Bossen"). The Applicant respectfully traverses. Claim 12 depends on claim 6, which is allowable over Arndt for at least the reasons discussed above. Bossen does not cure the deficiencies in Arndt. Withdrawal of the asserted rejection is therefore respectfully requested.

Conclusion

In light of the above discussion, Applicant respectfully submits that the present application is in all aspects in allowable condition, and earnestly solicits favorable reconsideration and early issuance of a Notice of Allowance.

The Examiner is invited to contact the undersigned at (408) 975-7500 to discuss any matter concerning this application. The Office is authorized to charge any fees related to this communication to Deposit Account No. 11-0600.

Respectfully submitted,

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